



CAIT

Center for Advanced Infrastructure & Transportation
Rutgers, The State University of New Jersey

QUARTERLY PROGRESS REPORT

Project Title:	Seismic Analysis of Retaining Walls, Buried Structures, Embankments, and Integral Abutments		
RFP NUMBER: 2000-25	NJDOT RESEARCH PROJECT MANAGER: Mr. Anthony Chmiel		
TASK ORDER NUMBER/Study Number: Task Order No. 126 / 4-26995	PRINCIPAL INVESTIGATOR: Dr. Husam Najm		
Study Start Date: 01/01/2003 Study End Date: 12/31/2003	Period Covered: 1 st Quarter 2003		

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Literature Review on Seismic Design of Abutments, Retaining Structures, Buried Structures, and Embankments	10	7	7	7
Provide Analysis, Design, and Detailing of Free Standing Abut and Retaining Walls	20	2	2	2
Provide Analysis, Design, and Detailing of Integral (Diaphragm) Abutments	20	2	2	2
Provide Guide Specifications Manual to Assist Designers in Designing Free-Standing and Integral Abutments, Embankments, Buried Structures and Retaining Walls	30	0	0	0
Prepare Progress reports	10	2	2	2
Prepare Technical Memorandum and Final Report	10	0	0	0
TOTAL	100%	13	13	13

1. Progress this quarter by task:
Review of proposed LRFD seismic design provisions and how it compares with current specs. Literature review of existing design procedures for free-standing and integral abutments from various references such as Caltrans and research papers. Preparation of simple pile-soil model with springs and same model with actual soil and compare both models to assess reliability of soil idealization using springs.
2. Proposed activities for next quarter by task:
Prepare a typical bridge model with free standing abutment and another with integral abutments and analyze models under seismic loads according to proposed LRFD provisions. Run parametric analysis and sensitivity analysis on these models. Compare results and make conclusions and recommendation. Prepare model for retaining wall under seismic loads.
3. List of deliverables provided in this quarter by task (product date):
None
4. Progress on Implementation and Training Activities:
None

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5. Problems/Proposed Solutions:

None

6. Budget Summary*

Total Project Budget (# of years)	1 Year	\$00,0000
Total Project Expenditure to date		\$0,000
% of Total Project Budget Expended		0%
Task Order Number/Study Number:		126 / 4-26995
Current Task Order Budget (# of years)	Year 1	\$00,0000
Actual Expenditure to date against current task order		\$00,000
% of current task order budget expended		00%

* These are approximate expended amounts for the project; these estimates are for reference only and should not be used for official accounting purposes. For a more accurate project accounting please review the quarterly invoice for this project.

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